Abstract

Use of compounds of formula (I):

$$(R^{1})_{n} \xrightarrow{X} (R^{2})_{m}$$

$$N = N - R^{3}$$

$$(I)$$

5 wherein

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X is S, O, S=O, SO₂, NR^a, or CR^bR^c;

R¹,R² are halogen, OH, SH, NH₂, CN, NO₂, alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenyl, alkenyloxy, alkenylamino, alkenylthio, alkynyloxy, alkynylamino, alkynylthio, alkylsulfonyl, alkylsulfoxyl, alkenylsulfonyl, alkynylsulfoxyl, formyl, alkylcarbonyl, hydroxycarbonyl, alkoxycarbonyl, carbonyloxy, alkylcarbonyloxy, phenyloxy, alkylcarbonylamino, C(O)NR^dR^e, or (SO₂)NR^dR^e, or C(=NOR^f)-G_p-R^f, or a mono- or bicyclic 5- to 10-membered aromatic or heteroaromatic ringsystem,

a mono- or bicyclic 5- to 10-membered aromatic or heteroaromatic ringsystem, optionally substituted, which is unfused or fused to the aromatic group to which it is bonded and which, when unfused, is bonded directly or through an O, S, alkyl, or alkoxy linkage, or cycloalkyl,

wherein the carbon atoms in these groups may be substituted.

R³,R⁴ are each independently H, alkyl, haloalkyl, alkylamino, alkoxy, cycloalkyl, wherein the carbon atoms in these groups may be substituted, or R³ and R⁴ together with the nitrogen atom to which they are attached form a saturated or partially saturated mono- or bicyclic 5- to 10-membered ringsystem or 5-membered hetaryl, phenyl or benzyl, wherein the rings are optionally sub-

or 5-membered hetaryl, phenyl or benzyl, wherein the rings are optionally stituted, or R³ and R⁴ together form the chains -(CH₂)₂N⁺(O⁻)(CH₂)₂- or

25 $-(CH_2)_3N^+(O^-)(CH_2)_2-;$

and Ra, Rb, Rc, Rd, Re, Rf, Rf, Rf, G, and p are as defined in the description;

m is 0, 1, 2, 3 or 4;

n is 0, 1, 2, 3 or 4;

or the enantiomers or diastereomers, salts or esters thereof for combatting insects, arachnids, or nematodes, methods for the control of these pests and of protecting growing plants from attack or infestation by these pests by applying a pesticidally effective amount of compounds of formula I, compounds of formula I, processes for preparing them, and compositions comprising them.